



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-1075; Directorate Identifier 2012-NM-111-AD; Amendment 39-18628; AD 2016-17-15]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. This AD was prompted by the need for more stringent inspection requirements for certain affected components. This AD requires revising the maintenance or inspection program to incorporate certain revised airworthiness limitations (AWL) and require repairs of affected components. We are issuing this AD to detect and correct fatigue cracking in the affected components; such cracking could result in loss of structural integrity.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone: 514-855-5000; fax: 514-855-7401; email: [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet: <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1075.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1075; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Jeffrey Zimmer, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7306; fax: 516-794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The SNPRM published in the Federal Register on October 27, 2015 (80 FR 65666) (“the SNPRM”). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on October 16, 2012 (77 FR 63282) (“the NPRM”). The NPRM proposed to require revising the maintenance or inspection program to incorporate revised AWL tasks specified in certain technical requirements. The NPRM was prompted by the need for more stringent inspection requirements for certain affected components. The SNPRM proposed to require revising the maintenance or inspection program to incorporate certain revised AWL tasks instead of TRs, and to require repairs of affected components. We are issuing this AD to detect and correct fatigue cracking in the affected components. Such cracking could result in loss of structural integrity.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian AD CF-2012-13, dated April 10, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes. The MCAI states:

A revision has been made to Part 2 of the Canadair Regional Jet Maintenance Requirements Manual (MRM), Airworthiness Limitations (AWL), to introduce more stringent inspection requirements for continued airworthiness based on re-analysis, in-service data and/or fatigue testing. Failure to comply with these revised AWL items could lead to an unsafe condition.

This [Canadian] AD is issued to ensure that fatigue cracking of these affected components [and consequent loss of airplane structural integrity] is detected and corrected.

Required actions include revising the maintenance program by incorporating the revised inspection requirements specified in certain TRs. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1075.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the SNPRM and the FAA's response to each comment.

### **Request to Withdraw SNPRM**

Mr. Aaron Ahern stated that the SNPRM must be denied and considered null and void. Mr. Ahern provided no justification for this statement.

From this statement, we infer that Mr. Ahern is requesting we withdraw the SNPRM. We disagree with the request. It is within our authority to issue ADs to require actions to address unsafe conditions that are not otherwise being addressed (or are not addressed adequately) by normal maintenance procedures. We may address such unsafe conditions by requiring revisions to maintenance or inspection programs as a condition under which airplanes may continue to be operated. We agree with TCCA's finding of an

unsafe condition based on analysis, in-service data, and/or fatigue testing. From the data gathered, we have determined that fatigue cracking is likely to exist or develop in certain components of the affected airplanes. As a result, we have determined that the actions required by this AD are necessary to address the identified unsafe condition. We have not changed this final rule in this regard.

### **Request to Allow for Other Methods of Compliance**

Air Wisconsin Airlines Corporation (Air Wisconsin) requested that we revise the proposed AD to allow qualified FAA representatives, such as Designated Engineering Representatives (DERs) and Organization Designation Authorization (ODA) holders, to approve repair methods. Air Wisconsin stated that 14 CFR 121.1109 (Supplemental Inspections) requires a certificate holder's maintenance program to include FAA-approved damage tolerance inspections and procedures. Air Wisconsin pointed out that both DERs and ODAs already perform damage tolerance evaluations (DTEs).

We disagree. While we might authorize a design approval holder's DERs to determine whether a design or repair method complies with a specific requirement of a structural AD, they are not authorized to make the discretionary determination of the applicable requirement. DERs are not authorized to approve repairs as alternative methods of compliance (AMOCs) to ADs, except under specific conditions described in FAA Orders 8110.103, 8100.15, and 8100.37. In addition, this AD already includes a provision for TCCA's Design Approval Organization (DAO) to approve repairs. We have not changed this AD in this regard.

### **Request to Confirm Previously Approved Repairs**

Air Wisconsin requested that we confirm whether repairs that may not have been incorporated per paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of the proposed AD (in the SNPRM) are still considered approved for compliance to this AD under paragraph (k)(2) of the proposed AD (in the SNPRM).

We agree. As long as the previously approved repair meets the requirements of paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of this AD, it does not matter when the repair is actually accomplished. We have clarified paragraph (k)(2)(i) of this AD to reflect this. In response to Air Wisconsin's comment regarding this issue in the NPRM, we had included a provision in paragraph (k)(2)(i) of the proposed AD (in the SNPRM) to allow for previously approved repairs in the inspection area that were approved by the Manager, New York Aircraft Certification Office, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO, but that provision included the language "the repairs were accomplished." We have removed that language from paragraph (k)(2)(i) of this AD.

### **Request to Reference Revised Service Information**

SkyWest Airlines (SkyWest) requested that we revise the SNPRM to reference the latest service information. SkyWest pointed out that Bombardier has issued Revision 10, dated May 10, 2015, of Part 2, Airworthiness Requirements, of the Bombardier CL-600-2B19 Maintenance Requirements Manual (MRM), CSP A-053.

We agree to reference Bombardier Revision 10, dated May 10, 2015, of Part 2, Airworthiness Requirements, of the Bombardier CL-600-2B19 MRM, CSP A-053, as the

appropriate source of service information for certain requirements of this AD. We have revised this final rule accordingly.

### **Request to Remove Requirement that Repair Approvals Refer to the MCAI**

SkyWest requested that we remove the requirement that repair approvals must refer to the MCAI. SkyWest stated that leaving this paragraph in the AD would require SkyWest to request a large number of AMOCs for their fleet as soon as the AD becomes effective. SkyWest asserts that none of the repair engineering orders (REOs) and general repair engineering orders (GREOs) reference the MCAI, and do not have an inspection method.

We disagree with the request. We are aware of instances of repairs in an affected area that are signed by the foreign authority's authorized delegate, but did not correct the unsafe condition because they were outdated. A repair that references the unsafe condition addressed in the MCAI guarantees an approved repair. A revised service document or AMOC that satisfies the requirements of paragraph (k)(2) of this AD is acceptable. We have not changed this AD in this regard.

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the SNPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### **Related Service Information under 1 CFR part 51**

Bombardier, Inc. has issued Appendix B – Airworthiness Limitations, of Part 2 Airworthiness Requirements, Revision 10, dated May 10, 2015, of the Bombardier CL-600-2B19 Maintenance Requirements Manual (MRM) CSP A-053. Appendix B provides specific AWLs, including the following AWLs.

- AWL 52-11-131, “Passenger door – piano hinge half on door side.” This AWL describes procedures for a detailed visual inspection of the piano hinge half on the passenger door side.

- AWL 53-11-122, “Windshield center post and bulkhead aft post at FS202.75.” This AWL describes procedures for a special detailed inspection of the windshield center post and bulkhead aft post at fuselage station (FS) 202.75.

- AWL 53-21-118, “Potable water servicing door cut-out and internal structure.” This AWL describes procedures for a detailed visual inspection of the potable water servicing door cut-out and internal structure.

- AWL 53-21-129, “Passenger door – piano hinge half on fuselage side.” This AWL describes procedures for a detailed visual inspection of the piano hinge half of the passenger door on the fuselage side.

- AWL 53-41-199, “FS409.0 +128 vertical posts at BL0.0 and BL18.0 left and right local to WL69.0.” This AWL describes procedures for a special detailed inspection of the FS409.0 +128 left and right vertical posts at buttock line (BL) 0.0 and BL18.0 local to water line (WL) 69.0.

- AWL 53-41-200, “FS409.0 +128 frame cap aft and fwd splice angles at STR21 left and right.” This AWL describes procedures for a detailed visual inspection of the FS409.0 +128 frame cap aft and forward splice angles at stringer 21.

- AWL 53-41-201, “FS559.0 pressure bulkhead web and cap angle local to BL9.0 and BL18.0 left and right.” This AWL describes procedures for a special detailed inspection of the left and right FS559.0 pressure bulkhead web and cap angle local to BL9.0 and BL18.0.

- AWL 53-61-156, “Rear pressure bulkhead forward face below floor.” This AWL describes procedures for a special detailed inspection of the below floor forward face of the rear pressure bulkhead.

- AWL 54-10-105, “Pylon track and support fitting.” This AWL describes procedures for a special detailed inspection of the pylon track and support fitting.

- AWL 54-10-106, “Pylon track and support fitting.” This AWL describes procedures for a special detailed inspection of the pylon track and support fitting.

- AWL 57-21-105, “Lower wing skin, between BL0.0 to wing station (WS) 314.0.” This AWL describes procedures for a detailed visual inspection of the lower wing skin, between BL0.0 to WS314.0.

- AWL 57-21-112, “Lower wing plank splice joints at BL45.0, WS65.75, and

WS148.0.” This AWL describes procedures for a special detailed inspection of the lower wing plank splice joints at BL45.0, WS65.75, and WS148.0.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

We estimate that this AD affects 575 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

<b>Estimated costs</b>			
<b>Action</b>	<b>Labor cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Revising maintenance program	1 work-hour X \$85 per hour = \$85	\$85	\$48,875

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2016-17-15 Bombardier, Inc:** Amendment 39-18628. Docket No. FAA-2012-1075; Directorate Identifier 2012-NM-111-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc. Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes, certificated in any category, serial numbers 7003 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 05, Periodic inspections.

**(e) Reason**

This AD was prompted by the need for more stringent inspection requirements for certain affected components. We are issuing this AD to detect and correct fatigue cracking in the affected components, which could result in loss of structural integrity.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Maintenance Program or Inspection Program Revision**

Within 60 days after the effective date of this AD: Revise the maintenance or inspection program, as applicable, to incorporate the revised inspection requirements specified in the AWLs identified in paragraphs (g)(1) through (g)(12) of this AD. These AWLs are identified in Appendix B – Airworthiness Limitations, of Part 2, Airworthiness Requirements, Revision 10, dated May 10, 2015, of the Bombardier CL-600-2B19 Maintenance Requirements Manual (MRM) CSP A-053.

(1) AWL 52-11-131, “Passenger door – piano hinge half on door side.”

(2) AWL 53-11-122, “Windshield center post and bulkhead aft post at FS202.75.”

(3) AWL 53-21-118, “Potable water servicing door cut-out and internal structure.”

(4) AWL 53-21-129, “Passenger door – piano hinge half on fuselage side.”

(5) AWL 53-41-199, “FS409.0+128 vertical posts at BL0.0 and BL18.0 left and right local to WL69.0.”

(6) AWL 53-41-200, “FS409.0+128 frame cap aft and fwd splice angles at STR21 left and right.”

(7) AWL 53-41-201, “FS559.0 pressure bulkhead web and cap angle local to BL9.0 and BL18.0 left and right.”

(8) AWL 53-61-156, “Rear pressure bulkhead forward face below floor.”

(9) AWL 54-10-105, “Pylon track and support fitting.”

(10) AWL 54-10-106, “Pylon track and support fitting.”

(11) AWL 57-21-105, “Lower wing skin, between BL0.0 to WS314.0.”

(12) AWL 57-21-112, “Lower wing plank splice joints at BL45.0, WS65.75, and WS148.0.”

**(h) Initial Compliance Times for AWL Tasks**

(1) For tasks with phase-in schedules specified in the AWLs identified in paragraphs (g)(1) through (g)(12) of this AD: The initial compliance times are at the applicable times specified in the applicable AWL, or within 60 days after the effective date of this AD, whichever occurs later, except as specified in paragraph (h)(2) of this AD.

(2) For tasks with no phase-in schedules specified in the AWLs identified in paragraphs (g)(1) through (g)(12) of this AD: The initial compliance times are at the applicable times specified in Appendix B – Airworthiness Limitations, of Part 2, Airworthiness Requirements, Revision 10, dated May 10, 2015, of the Bombardier CL-600-2B19 MRM CSP A-053; or within 1,000 flight cycles after the effective date of this AD; whichever occurs later.

**(i) Corrective Action**

If any damage (including, but not limited to, cracking, corrosion, and wear) is found during any inspection required by any AWL specified in paragraph (g) of this AD: Before further flight, repair using a method approved by the Manager, New York Aircraft Certification Office (ACO), ANE-170, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.’s TCCA Design Approval Organization (DAO).

**(j) No Alternative Actions or Intervals**

After accomplishing the revisions required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used other than those specified

in the AWLs identified in paragraphs (g)(1) through (g)(12) of this AD; unless the actions and intervals are approved as an AMOC in accordance with the procedures specified in paragraph (k) of this AD, or the actions and intervals are approved as part of a repair specified in paragraph (i) of this AD.

**(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone: 516-228-7300; fax: 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Previously Approved Repairs:** Repairs approved before the effective date of this AD that meet the conditions specified in paragraphs (k)(2)(i), (k)(2)(ii), and (k)(2)(iii) of this AD are acceptable methods of compliance for the repaired area.

(i) The repairs were approved by the Manager, New York ACO, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO.

(ii) The repair approval refers to Mandatory Continuing Airworthiness Information (MCAI) Canadian AD CF-2012-13, dated April 10, 2012, and provides an inspection program (inspection threshold, method, and repetitive interval).

(iii) The operator has revised its maintenance or inspection program, as applicable, to include the inspection program (inspection threshold, method, and repetitive interval) for the repair.

**(3) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO, ANE-170, FAA; or TCCA; or Bombardier, Inc.'s TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

**(l) Related Information**

Refer to MCAI Canadian AD CF-2012-13, dated April 10, 2012, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1075.

**(m) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Appendix B – Airworthiness Limitations, of Part 2, Airworthiness Requirements, of the Bombardier CL-600-2B19 Maintenance Requirements Manual, Revision 10, dated May 10, 2015.

(ii) Reserved.

(3) For service information identified in this AD, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone: 514-855-5000; fax: 514-855-7401; email: [thd.crj@aero.bombardier.com](mailto:thd.crj@aero.bombardier.com); Internet: <http://www.bombardier.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on August 18, 2016.

Dorr M. Anderson,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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